

### **REMARKS**

Claim 62 has been canceled without prejudice or disclaimer, leaving claims 59-61 and 63-70 are pending. Claims 59 and 63-67 have been amended. Claims 59 and 65-67 are independent.

### **REJECTIONS UNDER 35 U.S.C. § 112**

The Examiner rejects claims 59-70 under 35 U.S.C. §112, Second paragraph as allegedly being indefinite. Applicants have amended claims 59, and 65-67 taking into account the Examiner's comments. Because Applicants believe all of claims 59-61 and 63-70 are in accordance with 35 U.S.C. § 112, Second Paragraph, withdrawal of this rejection is requested.

### **REJECTIONS UNDER 35 U.S.C. § 102(e)**

The Examiner rejects claims 59-61 under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,855,034 ("Hasegawa"). Applicants respectfully traverse this rejection. The Examiner correctly recognizes that Hasegawa fails to teach or suggest a platen having "a platen window made of a transparent material in the hole of the platen to provide a void between the in-situ window area and the platen window," as previously set forth in claim 62. By way of this response, Applicants have amended claim 59 to include the features of claim 62. Therefore, Hasegawa fails to teach or fairly suggest all features of claim 59 as amended. Consequently, withdrawal of the rejection of claim 59 over Hasegawa is requested.

### **REJECTIONS UNDER 35 U.S.C. § 103**

Claims 62-70 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hasegawa in view of U.S. Patent Number 6,953,515 ("Boyd"). As noted above, **Applicants have amended claim 59 to include features somewhat similar to those previously set forth in claim 62. Accordingly, Applicants will address the rejection of claim 62 with respect to independent claim 59 as amended.**

Claim 59 is directed to a chemical mechanical polishing (CMP) table having a monitoring function for monitoring a CMP process *in-situ*. According to claim 59, the CMP table includes a polishing pad and a platen. The polishing pad includes an *in-situ* window area that is thinner than the polishing pad adjacent to the *in-situ* window area. The platen is attached to a side opposite to the polishing side of the polishing pad. The *in-situ* window area may be composed of the same material layer as the polishing pad adjacent to the *in-situ* window area and the platen may have a hole vertically aligned with the *in-situ* window area. The platen may also include a platen window made of a transparent material arranged in the hole of the platen to provide a void between the *in-situ* window area and the platen window.

Referring to FIGS. 1-4, Hasegawa discloses a polishing pad including a portion molded thinner than the maximum thickness of the polishing pad. The thickness of the thinner portion of the polishing pad allows transmission of light there thru. In FIGS. 8-11, Hasegawa discloses another embodiment of a polishing pad in which the polishing pad has a through hole penetrating from

surface to back. A light transmitting part is fitted within the above-mentioned through hole. The light transmitting part, however, is not the same material layer as the body of the polishing pad.

Referring to FIG. 24, Hasegawa discloses a polishing apparatus including a polishing pad 1 and a rotatable surface plate 2. The polishing pad 1 is fixed on the surface plate 2, and is formed in accordance with one of the above-described embodiments. The surface plate 2 is either comprised of a light transmitting material or includes a through-hole for transmitting light.

Contrary to claim 59, however, Hasegawa does not disclose any platen window associated with the embodiment of the surface plate 2 having a through hole for transmitting light. Therefore, Hasegawa fails to disclose or fairly suggest a platen including "a platen window made of a transparent material arranged in the hole of the platen to provide a void between the in-situ window area and the platen window," as required by claim 59.

Moreover, even assuming *arguendo* the teachings of Hasegawa could be combined with the teachings of Boyd (which Applicants do not admit), the combination still fails to teach or fairly suggest the CMP table of claim 59 because even in combination these teachings fail to teach or fairly suggest a platen including "a platen window made of a transparent material arranged in the hole of the platen to provide a void between the in-situ window area and the platen window," as required by claim 59.

Boyd discloses an apparatus for optical endpoint detection including a polishing pad 120 and a platen 128. FIG. 3 illustrates a side view of the platen

128. As shown, an optical sensor 130 is recessed in a window plug 132 within the platen 128. An optical fiber bundle 134 is routed from the optical sensor 130 inward and radially toward the center of the platen 128 and downward to an optical-electrical converter 138. *Boyd* at col. 5, ll. 7-16.

FIG. 6 illustrates a cross-section view of window plug 132 shown in FIG.

3. Wafer 102 is pressed against polishing pad 120, and pad 120 has an aperture 122 configured to accommodate the window plug 132. The platen 128 also has an aperture 160.

The Examiner relies upon the window plug 132 of *Boyd* to allegedly teach the "platen window made of a transparent material arranged in the hole of the platen to provide a void between the in-situ window area and the platen window," as required by claim 59. However, Applicants disagree with the Examiner's conclusion because *Boyd* is silent with regard to the composition of the window plug 132, and nothing in *Boyd* indicates that the window plug 132 is comprised of a transparent material.

As the Examiner will appreciate from review of FIG. 3, an optical fiber bundle 134 connects an optical sensor 130, arranged within the window plug 132, to an optical-electrical converter 138. Thus, instead of creating a transparent window plug as suggested by the Examiner, Boyd uses optical fiber bundle 134 to transmit signals from the optical sensor 130 to the detector 138. Accordingly, not only is *Boyd* silent with regard to the composition of the alleged window plug 132, but the window plug 132 of *Boyd* need not be

transparent because the optical fiber bundle 134 transmits light signals from the optical sensor 130 to the converter 138.

Therefore, even assuming *arguendo* that Hasegawa could be combined with Boyd (which Applicants do not admit), the resultant combination would still fail to render claim 59 obvious because the resultant combination still fails to teach or suggest all features of claim 59. M.P.E.P. § 706.02(j). Withdrawal of the rejection of claim 59 is requested.

The rejection of claims 65-67 should be withdrawn for at least reasons somewhat similar to those set forth above with regard to claim 59. Claims 60-61, 63-64 and 68-70 are allowable at least by virtue of their dependency from claims 59 or 65-67.

### **CONCLUSION**

In view of the above remarks, favorable reconsideration and allowance of all pending claims is requested.

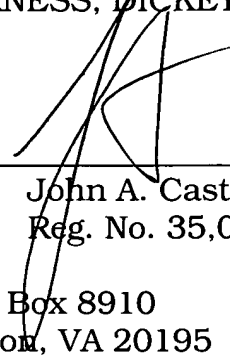
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Andrew M. Waxman at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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